Name _____

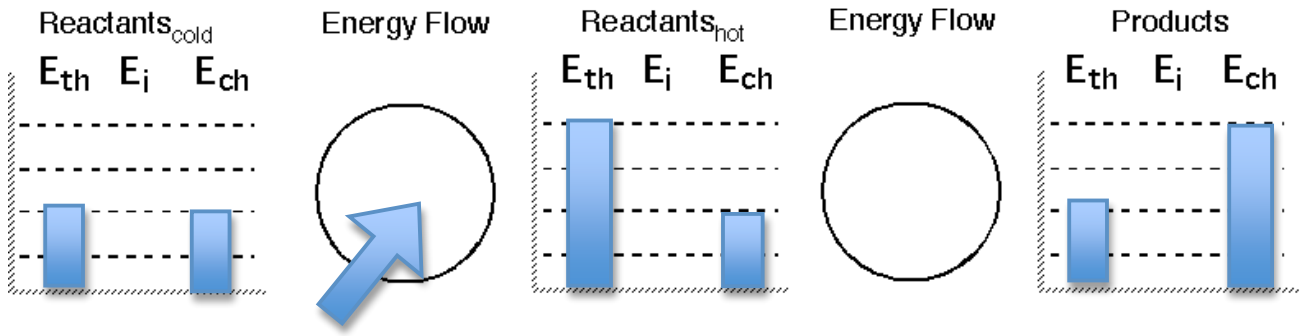
Date _____ Pd ____

Chemistry – Unit 6 Worksheet 4A

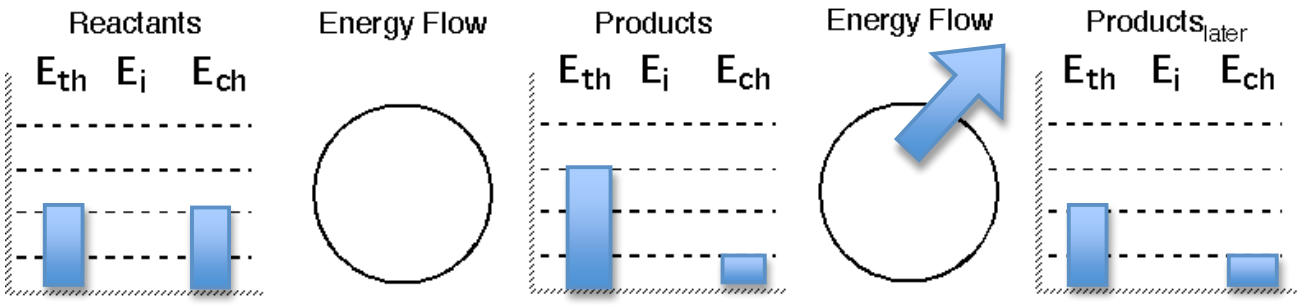
Representing Chemical Potential Energy in Change

For each of the reactions below, write the balanced chemical equation, including the energy term on the correct side of the equation. Then represent the energy storage and transfer using the bar graphs. Below the bar graph diagram, sketch a standard chemical potential energy curve for the reaction.

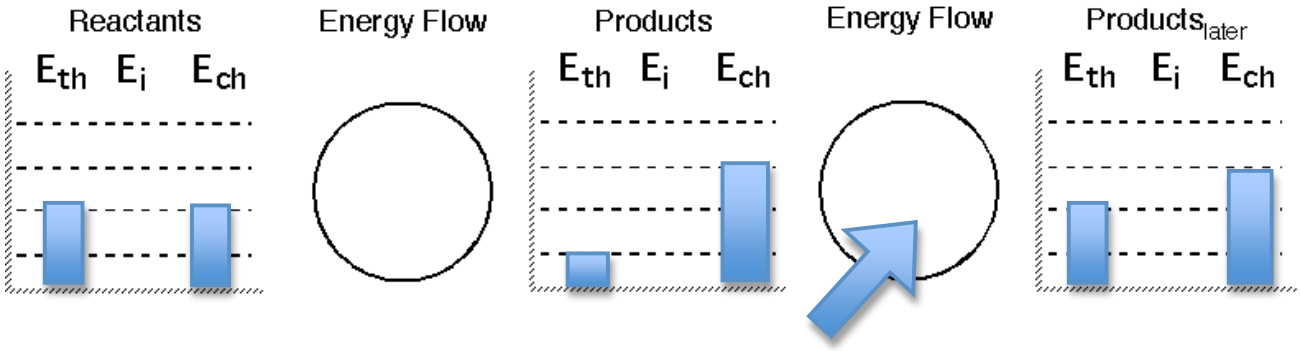
1. You crack an egg and place it in a hot frying pan. In a few seconds, the egg white turns from clear liquid to opaque white solid. (Endothermic)



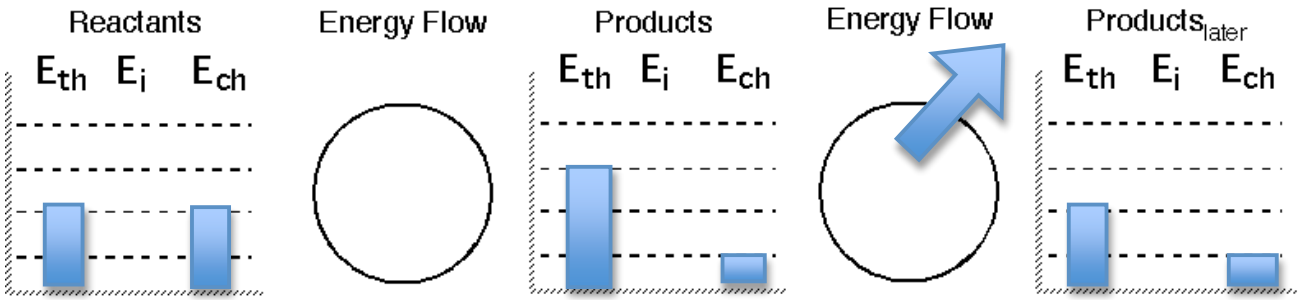
2. Potassium metal is dropped into a flask of water. The reaction of the metal with the water gets hot, flames shoot up and hydrogen gas as well as aqueous potassium hydroxide are formed. (Exothermic)



3. Vinegar (hydrogen acetate) is mixed into sodium bicarbonate. The resulting "volcano" reaction forms lots of bubbles, water and sodium acetate. The container also feels cooler after the reaction. (Endothermic)



4. Iron powder is left in a beaker exposed to the air. A thermometer in the beaker shows that the beaker gets warmer over time. The next day, most of the iron has formed iron (III) oxide. (Exothermic)



5. Chunks of sodium hydroxide are dropped into a flask of water. During the dissolving, the flask gets very hot. Aqueous sodium hydroxide is formed. (Exothermic)